

What is claimed is:

1. A sputtering target assembly comprising a target and a backing plate wherein the backing plate is made of a material having a conductivity less than or equal to 45% IACS and wherein the material is selected from the group consisting of: Al alloys, Cu alloys, magnesium, magnesium alloys, molybdenum, molybdenum alloys, zinc, zinc alloys, nickel and nickel alloys.
2. The assembly as recited in claim 1 wherein said conductivity of the backing plate material is less than 35% IACS.
3. The assembly as recited in claim 1 wherein the backing plate material is brass having a composition of at least 20% Zn.
4. The assembly as recited in claim 1 wherein the backing plate material is bronze, wherein the composition of the backing plate is less than 1.25 weight percent Sn.
5. The assembly as recited in claim 1 wherein the backing plate material is an aluminum alloy, wherein the alloy is a 5000 series Al with a composition greater than 2 weight percent Mg.
6. The assembly as recited in claim 1 wherein the backing plate material is a 5000 series aluminum alloy selected from the group consisting of: 5052, 5056, 5083, 5086, 5154, 5252, 5254, 5356, 5454 and 5456.
7. The assembly as recited in claim 1 wherein the backing plate material is a 7000 series aluminum alloy selected from the group consisting of: 7075 and 7198.

8. The assembly as recited in claim 1 wherein the backing plate material is a 2000 series aluminum alloy selected from the group consisting of: 2014, 2017, 2024 and 2219.

9. The assembly as recited in claim 1 wherein the conductivity of the backing plate material is between 10% and 45% IACS.

10. A sputtering target assembly comprising a target and a backing plate wherein the backing plate is made of a material having an electrical conductivity less than or equal to 35% IACS.

11. A method of forming a sputtering target assembly comprising the steps of:

forming a backing plate from a material having a conductivity less than 45% IACS;

bonding the backing plate to a sputter target.

12. The method of claim 11 wherein the backing plate material is selected from the group consisting of Al alloys, Cu alloys, magnesium, magnesium alloys, molybdenum, molybdenum alloys, zinc, zinc alloys, nickel and nickel alloys.